

Treatment BMPs Checklist T-1, Part 2	
Prepared by: <u>JLe</u>	Date: <u>06/11/ 2007</u> District-Co-Route: <u>07-LA-210</u>
KP (PM): <u>39.66/40.70 (R24.64/R25.29)</u>	EA: <u>24340k</u>
RWQCB: <u>Region 4 Los Angeles</u>	

Biofiltration Swales / Biofiltration Strips

Feasibility

1. Do the climate and site conditions allow vegetation to be established? ☒ Yes ☐ No

2. Are flow velocities < 1.2 m/s (4 fps) (i.e. low enough to prevent scour of the vegetated bioswale as per HDM Table 873.3I)? ☒ Yes ☐ No

- If No to either question above, Biofiltration Swales and Biofiltration Strips are not feasible.

3. Are Biofiltration Swales proposed at sites where known hazardous soils or contaminated groundwater plumes exist? ☐ Yes ☒ No
 If Yes, consult with District/Regional NPDES Coordinator about how to proceed.

4. Does adequate area exist within the right-of-way to place biofiltration device(s)? ☐ Yes ☒ No
 If Yes, continue to the Design Elements section. If No, continue to Question 5.

5. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site biofiltration devices and how much right-of way would be needed to treat WQF? _____ ha (ac) ☐ Yes ☒ No
 If Yes, continue to Design Elements section. If No, continue to Question 6.

6. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of these Treatment BMPs into the project. ☒ Complete

Design Elements

*** Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

**** Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Has the District Landscape Architect provided vegetation mixes appropriate for climate and location? * ☐ Yes ☐ No



- | | | |
|--|------------------------------|-----------------------------|
| 2. Can the bioswale be designed as a conveyance system under any expected flows > the WQF event, as per HDM Chapter 800? * (e.g. freeboard, minimum slope, etc.) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. Can the bioswale be designed as a water quality treatment device under the WQF while meeting the required HRT, depth, and velocity criteria? * | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Is the maximum length of a biostrip ≤ 91 m (300 ft)? * | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. Has the minimum width (in the direction of flow) of the invert of the bioswale received the concurrence of Maintenance? * | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 6. Can bioswales be located in natural or low cut sections to reduce maintenance problems caused by animals burrowing through the berm of the swale? ** | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 7. Is the biostrip sized as long as possible in the direction of flow (HRT ≥ 5 minutes)? ** | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 8. Has biofiltration been considered for locations upstream of other Treatment BMPs, as part of a treatment train? ** | <input type="checkbox"/> Yes | <input type="checkbox"/> No |



Treatment BMPs
Checklist T-1, Part 4

Prepared by: JLe Date: 06/11/ 2007 District-Co-Route: 07-LA-210
KP (PM): 39.66/40.70 (R24.64/R25.29) EA: 24340k
RWQCB: Region 4 Los Angeles

Infiltration Devices**Feasibility**

1. Does local Basin Plan or other local ordinance provide influent limits on quality of water that can be infiltrated, and would infiltration pose a threat to groundwater quality as determined by the District/Regional NPDES Storm Water Coordinator? ☐ Yes ☒ No
2. Does infiltration at the site compromise the integrity of any slopes in the area? ☐ Yes ☒ No
3. Per survey data or U.S. Geological Survey (USGS) Quad Map, are existing slopes at the proposed device site >15%? ☐ Yes ☒ No
4. At the invert, does the soil type classify as NRCS Hydrologic Soil Group (HSG) D, or does the soil have an infiltration rate < 1.3 cm/hr (0.5 inches/hr)? ☒ Yes ☐ No
5. Is site located over a previously identified contaminated groundwater plume? ☐ Yes ☒ No

If Yes to any question above, Infiltration Devices are not feasible; stop here and consider other approved Treatment BMPs.

6. (a) Does site have groundwater within 3 m (10 ft) of basin invert? ☐ Yes ☐ No
(b) Does site investigation indicate that the infiltration rate is significantly greater than 6.4 cm/hr (2.5 inches/hr)? ☐ Yes ☐ No

If Yes to either part of Question 6, the RWQCB must be consulted, and the RWQCB must conclude that the groundwater quality will not be compromised, before approving the site for infiltration. ☐ Yes ☐ No

7. Does adequate area exist within the right-of-way to place infiltration device(s)? If Yes, continue to Design Elements sections. If No, continue to Question 8. ☐ Yes ☐ No
8. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site infiltration devices and how much right-of way would be needed to treat WQV? _____ ha (ac) ☐ Yes ☐ No

If Yes, continue to Design Elements section.

If No, continue to Question 9.

9. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐ Complete



Design Elements – Infiltration Basin

* **Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

** **Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Has a detailed investigation been conducted, including subsurface soil investigation, in-hole conductivity testing and groundwater elevation determination? (This report must be completed for PS&E level design.) * ☐ Yes ☐ No
2. Has a flood control spillway with scour protection been provided? * ☐ Yes ☐ No
3. Is the Infiltration Basin size sufficient to capture the WQV while maintaining a 40-48 hour drawdown time? (Note: the WQV must be $\geq 123\text{m}^3$ [0.1 acre-feet]) * ☐ Yes ☐ No
4. Can access be placed to the invert of the Infiltration Basin? * ☐ Yes ☐ No
5. Can the Infiltration Basin be designed with adequate freeboard above the WQV elevation? * ☐ Yes ☐ No
6. Can the Infiltration Basin be designed with interior side slopes no steeper than 1V:3H (with approval by District Maintenance, with 1:4 preferred)? * ☐ Yes ☐ No
7. Can vegetation be established in the Infiltration Basin? ** ☐ Yes ☐ No
8. Can diversion be designed, constructed, and maintained to bypass flows exceeding the WQV? ** ☐ Yes ☐ No
9. Can a gravity-fed Maintenance/Emergency Drain be placed? ** ☐ Yes ☐ No

Design Elements – Infiltration Trench

* **Required** Design Element – (see definition above)

** **Recommended** Design Element – (see definition above)

1. Has a detailed investigation been conducted, including subsurface soil investigation, in-hole conductivity testing and groundwater elevation determination? (This report must be completed for PS&E level design.) * ☐ Yes ☐ No
2. Is the surrounding soil within Hydrologic Soil Groups (HSG) Types A or B? * ☐ Yes ☐ No
3. Is the volume of the Infiltration Trench equal to at least the 3x the WQV, while maintaining a drawdown time of ≤ 72 hours? (Note: the WQV must be $\geq 123\text{m}^3$ [0.1 acre-feet], unless the District/Regional NPDES Coordinator will allow a volume between 80m^3 and 123m^3 to be considered.) * ☐ Yes ☐ No
4. Is the depth of the Infiltration Trench ≤ 4 m, and is the depth < the width? * ☐ Yes ☐ No
5. Can an observation well be placed in the trench? * ☐ Yes ☐ No
6. Can access be provided to the Infiltration Trench? * ☐ Yes ☐ No
7. Can pretreatment be provided to capture sediment in the runoff (such as using biofiltration)? * ☐ Yes ☐ No
8. Can flow diversion be designed, constructed, and maintained to bypass flows exceeding the WQV? ** ☐ Yes ☐ No
9. Can a perimeter curb or similar device be provided (to limit wheel loads upon the trench)? ** ☐ Yes ☐ No



Treatment BMPs Checklist T-1, Part 5	
Prepared by: <u>JLe</u>	Date: <u>06/11/ 2007</u>
KP (PM): <u>39.66/40.70 (R24.64/R25.29)</u>	District-Co-Route: <u>07-LA-210</u>
RWQCB: <u>Region 4 Los Angeles</u>	EA: <u>24340k</u>

Detention Devices

Feasibility

1. Is there sufficient head to prevent objectionable backwater conditions in the upstream drainage systems? ☒ Yes ☐ No
2. 2a) Is the volume of the detention device equal to at least the WQV? (Note: the WQV must be $\geq 123\text{m}^3$ [0.1 acre-feet]) ☒ Yes ☐ No

Only answer (b) if the detention device is being used also to capture traction sand.

- 2b) Is the total volume of the detention device at least equal to the WQV and the anticipated volume of traction sand, while maintaining a minimum 300 mm freeboard (1 ft)? ☐ Yes ☐ No
3. Is basin invert ≥ 3 m above seasonally high groundwater or can it be designed with an impermeable liner? (Note: If an impermeable liner is used, the seasonally high groundwater elevation must not encroach within 300 mm (12 inches) of the invert.) ☒ Yes ☐ No

If No to any question above, then Detention Devices are not feasible.

4. Does adequate area exist within the right-of-way to place Detention Device(s)? ☐ Yes ☒ No
 If Yes, continue to the Design Elements section. If No, continue to Question 5.
5. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site Detention Device(s) and how much right-of way would be needed to treat WQV? _____ ha (ac) ☐ Yes ☒ No
 If Yes, continue to the Design Elements section. If No, continue to Question 6.
6. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☒ Complete



Design Elements

* **Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

** **Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Has the geotechnical integrity of the site been evaluated to determine potential impacts to surrounding slopes due to incidental infiltration? If incidental infiltration through the invert of an unlined detention device is a concern, consider using an impermeable liner. * ☐ Yes ☐ No
2. Has the location of the detention device been evaluated for any effects to the adjacent roadway and subgrade? * ☐ Yes ☐ No
3. Can a minimum freeboard of 300 mm (12 in) be provided above the WQV? * ☐ Yes ☐ No
4. Is an emergency outlet provided? * ☐ Yes ☐ No
5. Is the drawdown time of the detention basin within 24 to 72 hours? * ☐ Yes ☐ No
6. Is the basin outlet designed to minimize clogging (minimum outlet orifice diameter of 13 mm (0.5 inches)? * ☐ Yes ☐ No
7. Are the inlet and outlet structures designed to prevent scour and re-suspension of settled materials, and to enhance quiescent conditions? * ☐ Yes ☐ No
8. Can vegetation be established in an earthen basin at the invert and on the side slopes for erosion control and to minimize re-suspension? * ☐ Yes ☐ No
9. Has sufficient access for Maintenance been provided? * ☐ Yes ☐ No
10. Is the side slope ratio of earthen berms 1V:3H or flatter? ** ☐ Yes ☐ No
(Note: If No, District Maintenance must approve.)
11. If significant sediment is expected from nearby slopes, can the detention device be designed with additional volume equal to the expected annual loading? ** ☐ Yes ☐ No
12. Is flow path as long as possible ($\geq 2:1$ length to width ratio is recommended)? ** ☐ Yes ☐ No



Treatment BMPs		
Checklist T-1, Part 6		
Prepared by: <u>JLe</u>	Date: <u>06/11/ 2007</u>	District-Co-Route: <u>07-LA-210</u>
KP (PM): <u>39.66/40.70 (R24.64/R25.29)</u>	EA: <u>24340k</u>	
RWQCB: <u>Region 4 Los Angeles</u>		

Gross Solids Removal Devices (GSRDs)

Feasibility

1. Is the receiving water body downstream of the tributary area to the proposed GSRD on a 303(d) list or has a TMDL for litter been established? ☒ Yes ☐ No
2. Are the devices sized for peak HDM design flow or can peak flow be diverted? ☒ Yes ☐ No
3. Are the devices sized to contain gross solids (litter and vegetation) for a period of one year? ☒ Yes ☐ No
4. Is there sufficient access for maintenance and large equipment (vacuum truck)? ☒ Yes ☐ No

If No to any question above, then Gross Solids Removal Devices are not feasible. Note that Biofiltration Systems, Infiltration Devices, Detention Devices, Dry Weather Flow Diversion, MCTT, Media Filters, and Wet Basins may be considered for litter capture, but consult with District/Regional NPDES if proposed to meet a TMDL for litter.

4. Does adequate area exist within the right-of-way to place Gross Solids Removal Devices?
If Yes, continue to Design Elements section. If No, continue to Question 5. ☐ Yes ☒ No
5. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site Gross Solids Removal Devices and how much right-of-way would be needed? _____ ha (ac)
If Yes, continue to the Design Elements section. If No, continue to Question 6. ☐ Yes ☒ No
6. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☒ Complete



Design Elements – Linear Radial Device

*** Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

**** Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Does sufficient hydraulic head exist to place the Linear Radial GSRD? * ☐ Yes ☐ No
2. Was the litter accumulation rate of 0.7m³/ha/yr (10 ft³/ac/yr) (or a different rate recommended by Maintenance) used to size the device? * ☐ Yes ☐ No
3. Were the standard detail sheets used for the layout of the devices? **
If No, consult with Headquarters Office of Storm Water Management and District/Regional NPDES. ☐ Yes ☐ No

Design Elements – Inclined Screen

*** Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

**** Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Does sufficient hydraulic head exist to place the Inclined Screen GSRD? * ☐ Yes ☐ No
2. Was the litter accumulation rate of 0.7m³/ha/yr (10 ft³/ac/yr) (or a different rate recommended by Maintenance) used to size the device? * ☐ Yes ☐ No
3. Were the standard details sheets used for the layout of the devices? **
If No, consult with Headquarters Office of Storm Water Management and District NPDES. ☐ Yes ☐ No



Treatment BMPs

Checklist T-1, Part 8

Prepared by: JLe Date: 06/11/2007 District-Co-Route: 07-LA-210
 KP (PM): 39.66/40.70 (R24.64/R25.29) EA: 24340k
 RWQCB: Region 4 Los Angeles

Media Filters

Caltrans has approved two types of Media Filter: Austin Sand Filters and Delaware Filters. Austin Sand filters are typically designed for larger drainage areas, while Delaware Filters are typically designed for smaller drainage areas. The Austin Sand Filter is constructed with an open top and may have a concrete or earthen invert, while the Delaware is always constructed in as a vault. See Appendix B, Media Filters, for a further description of Media Filters.

Feasibility – Austin Sand Filter

1. Is the volume of the Austin Sand Filter equal to at least the WQV using a 40 to 48 hour drawdown? (Note: the WQV must be $\geq 123\text{m}^3$ [0.1 acre-feet]) ☐ Yes ☒ No
2. Is there sufficient hydraulic head to operate the device (minimum 0.9 m [3 ft] between the inflow and outflow chambers)? ☐ Yes ☒ No
 If No to either question above, then an Austin Sand Filter is not feasible.
3. Does adequate area exist within the right-of-way to place an Austin Sand Filter(s)? ☐ Yes ☒ No
 If Yes, continue to Design Elements sections. If No, continue to Question 4.
4. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site the device and how much right-of way would be needed to treat WQV? _____ ha (ac) ☐ Yes ☒ No
 If Yes, continue to the Design Elements section.
 If No, continue to Question 5.
5. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☒ Complete

If an Austin Sand Filter meets these feasibility requirements, continue to the Design Elements – Austin Sand Filter below.



Feasibility- Delaware Filter

1. Is the volume of the Delaware Filter equal to at least the WQV using a 40 to 48 hour drawdown? (Note: the WQV must be $\geq 123\text{m}^3$ [0.1 acre-feet], consult with District/Regional NPDES if a lesser volume is under consideration.) ☐ Yes ☐ No
2. Is there sufficient hydraulic head to operate the device (minimum 0.9 m [3 ft] between the inflow and outflow chambers)? ☐ Yes ☐ No
3. Would a permanent pool of water be allowed by the local vector control agency? ☐ Yes ☒ No

If No to any question, then a Delaware Filter is not feasible

4. Does adequate area exist within the right-of-way to place a Delaware Filter (s)?
If Yes, continue to Design Elements sections. If No, continue to Question 5. ☐ Yes ☒ No
5. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site the device and how much right-of way would be needed to treat WQV? _____ ha (ac) ☐ Yes ☒ No
If Yes, continue to the Design Elements section. If No, continue to Question 6.
6. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☒ Complete

If a Delaware Filter is still under consideration, continue to the Design Elements – Delaware Filter section.

Design Elements – Austin Sand Filter

*** Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

**** Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Is the drawdown time of the 2nd chamber between 40 and 48 hours? * ☐ Yes ☐ No
2. Is access for Maintenance vehicles provided to the Austin Sand Filter? * ☐ Yes ☐ No
3. Is a bypass/overflow provided for storms > WQV? * ☐ Yes ☐ No
4. Is the flow path length to width ratio for the sedimentation chamber of the “full” Austin Sand Filter $\geq 2:1$? **
5. Can pretreatment be provided to capture sediment and litter in the runoff (such as using biofiltration)? ** ☐ Yes ☐ No
6. Can the Austin Sand Filter be placed using an earthen configuration? **
If No, go to Question 8. ☐ Yes ☐ No



7. Is the Austin Sand Filter invert separated from the seasonally high groundwater table by $\geq 3\text{m}$? * ☐ Yes ☐ No
If No, design with an impermeable liner.
8. Can the Austin Sand Filter be placed in an offline configuration? ** ☐ Yes ☐ No

Design Elements – Delaware Filter

* **Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

** **Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

1. Can the first chamber be sized for the WQV? * ☐ Yes ☐ No
2. Is the drawdown time of the 2nd chamber between 40 and 48 hours? * ☐ Yes ☐ No
3. Is access for Maintenance vehicles provided to the Delaware Filter? * ☐ Yes ☐ No
4. Is a bypass/overflow provided for storms > WQV? ** ☐ Yes ☐ No
5. Can pretreatment be provided to capture sediment and litter in the runoff (such as using biofiltration)? ** ☐ Yes ☐ No
6. Can the Delaware Filter be placed in an offline configuration? ** ☐ Yes ☐ No



Treatment BMPs

Checklist T-1, Part 9

Prepared by: JLe Date: 06/11/ 2007 District-Co-Route: 07-LA-210
 KP (PM): 39.66/40.70 (R24.64/R25.29) EA: 24340k
 RWQCB: Region 4 Los Angeles

MCTT (Multi-chambered Treatment Train)

Feasibility

1. Is the proposed location for the MCTT located to serve a "critical source area" (i.e. vehicle service facility, parking area, paved storage area, or fueling station)? ☐ Yes ☒ No
2. Is the WQV $\geq 123 \text{ m}^3$? ☐ Yes ☐ No
3. Would a permanent pool of water be allowed by the local vector control agency? ☐ Yes ☒ No
 If No to any question above, then an MCTT is not feasible.
4. Does adequate area exist within the right-of-way to place an MCTT(s)? ☐ Yes ☒ No
 If Yes, continue to Design Elements sections. If No, continue to Question 5.
5. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site the device and how much right-of way would be needed to treat WQV? _____ ha (ac) ☐ Yes ☒ No
 If Yes, continue to Design Elements section. If No, continue to Question 6.
6. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☒ Complete

Design Elements

* **Required** Design Element – A "Yes" response to these questions is required to further the consideration of this BMP into the project design. Document a "No" response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

** **Recommended** Design Element – A "Yes" response is preferred for these questions, but not required for incorporation into a project design.

1. Is the maximum depth of the 3rd chamber $\leq 4 \text{ m}$ below ground surface and has Maintenance accepted this depth? * ☐ Yes ☐ No
2. Is the drawdown time in the 3rd chamber between 40 and 48 hours? * ☐ Yes ☐ No
3. Is access for Maintenance vehicles provided to the MCTT? * ☐ Yes ☐ No
4. Is there sufficient hydraulic head to operate the device? * ☐ Yes ☐ No
5. Has a bypass/overflow been provided for storms $> \text{WQV}$? * ☐ Yes ☐ No
6. Can pretreatment be provided to capture sediment and litter in the runoff (such as using biofiltration)? ** ☐ Yes ☐ No



Treatment BMPs

Checklist T-1, Part 10

Prepared by: JLe Date: 06/11/ 2007 District-Co-Route: 07-LA-210
 KP (PM): 39.66/40.70 (R24.64/R25.29) EA: 24340k
 RWQCB: Region 4 Los Angeles

Wet Basin

Feasibility

1. Is the volume of the Wet Basin above the permanent pool equal to at least the WQV using a 40 to 48 hour drawdown? (Note: the WQV must be $\geq 123\text{m}^3$ [0.1 acre-feet] and the permanent pool must be at least 3x the WQV.) ☒ Yes ☐ No

2. Is a permanent source of water available in sufficient quantities to maintain the permanent pool for the wet basin? ☐ Yes ☒ No

Answer either question 3 or question 4:

3. For Wet Basins with a proposed invert above the seasonally high groundwater, Are NRCS Hydrologic Soil Groups [HSG] C and D at the proposed invert elevation, or can an impermeable liner be used? (Note: If an impermeable liner is used, the seasonally high groundwater elevation must not encroach within 300 mm (12 in) of the invert.) ☒ Yes ☐ No

4. For Wet Basins with a proposed invert below the groundwater table: Can written approval from the local Regional Water Quality Control Board be obtained to place the wet basin in direct hydraulic connectivity to the groundwater? ☐ Yes ☒ No

5. Would a permanent pool of water be allowed by the local vector control agency? ☐ Yes ☒ No

If No to any question above, then a Wet Basin is not feasible.

6. Does adequate area exist within the right-of-way to place a Wet Basin?
 If Yes, continue to Design Elements sections. ☐ Yes ☒ No

If No, continue to Question 7.

7. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site the device and how much right-of way would be needed to treat WQV? _____ ha (ac) ☐ Yes ☒ No
 If Yes, continue to Design Elements section.

If No, continue to Question 8.

8. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☒ Complete



Design Elements

*** Required** Design Element – A “Yes” response to these questions is required to further the consideration of this BMP into the project design. Document a “No” response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

**** Recommended** Design Element – A “Yes” response is preferred for these questions, but not required for incorporation into a project design.

- | | | |
|--|------------------------------|-----------------------------|
| 1. Can a controlled outlet and an overflow structure be designed for storm events larger than the WQV? * | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Is access for Maintenance vehicles provided? * | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. Is the drawdown time for WQV events between 24 and 72 hours? * | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Has appropriate vegetation been selected for each hydrologic zone? * | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. Can all design elements required by the local vector control agency be incorporated? * | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 6. Has a minimum flow path length-to-width ration of at least 2:1 been provided? ** | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 7. Has an upstream bypass been provided for storms > WQV? ** | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 8. Can pretreatment be provided to capture sediment and litter in the runoff (such as using biofiltration, or a forebay)? ** | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 9. Can public access be restricted using a fence if proposed at locations accessible on foot by the public? ** | <input type="checkbox"/> Yes | <input type="checkbox"/> No |





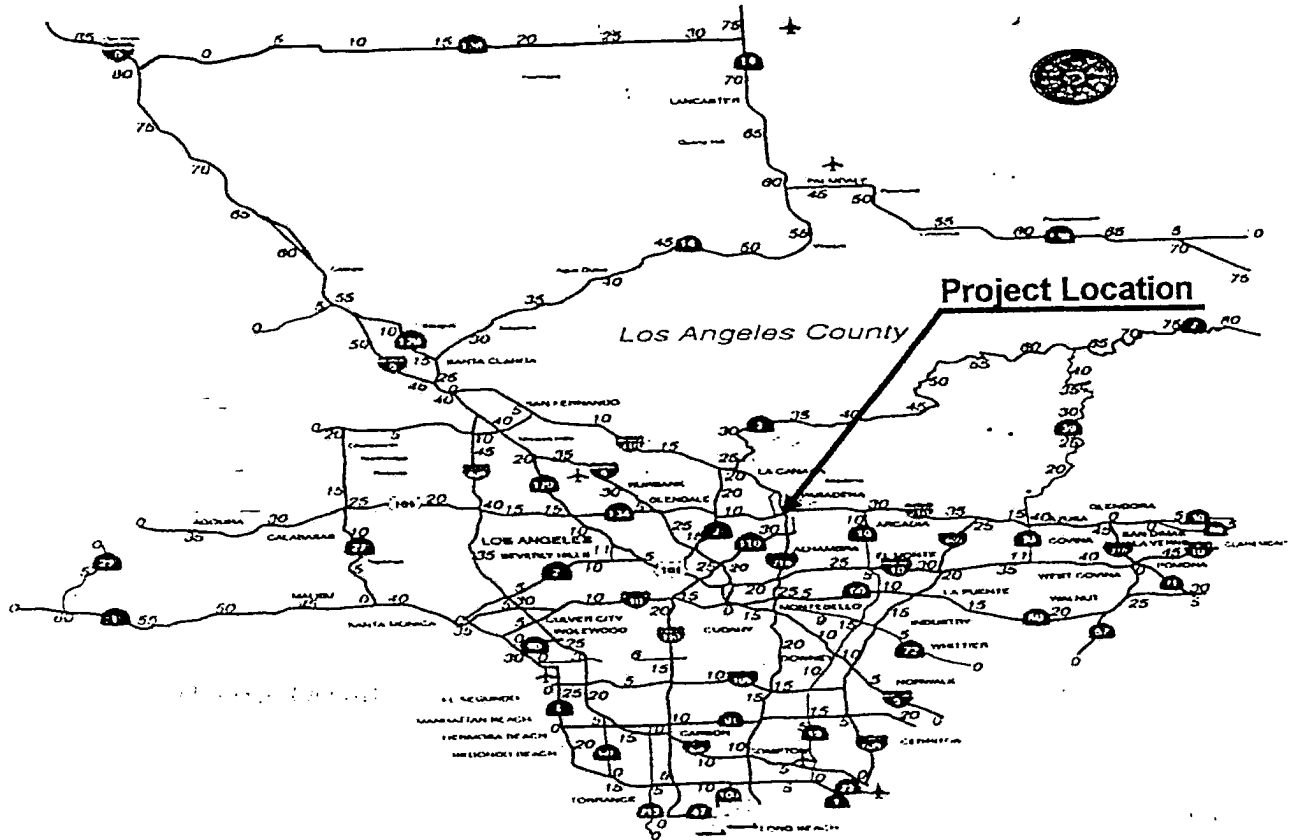
07-LA-210-KP R39.66/R40.70 (PM R24.64/R25.29)

07373-24340K

2004 SHOPP (201.170)

November, 2003

PROJECT STUDY REPORT / PROJECT REPORT (PSR/PR)

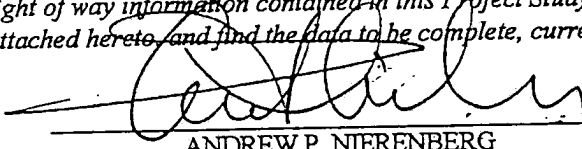


On Route: 210 (Foothill Freeway)

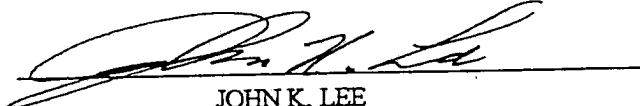
From: Orange Grove Boulevard Overcrossing (KP 39.66)

To: Fair Oaks Avenue Overcrossing (KP 40.70)

I have reviewed the right of way information contained in this Project Study Report/Project Report and the R/W Data Sheet attached hereto, and find the data to be complete, current, and accurate


ANDREW P. NIERENBERG
RIGHT OF WAY DELIVERY MANAGER

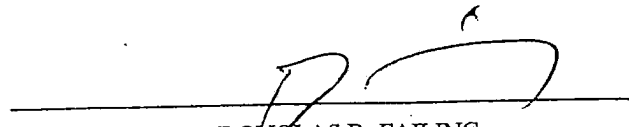
APPROVAL RECOMMENDED:


JOHN K. LEE
PROJECT MANAGER

CONCURRED:


FRANK L. QUON
DEPUTY DISTRICT DIRECTOR, OPERATIONS

APPROVED:


DAVID ASPRADAKIS

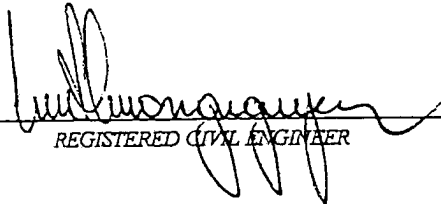
DATE

11/8/04

PROJECT STUDY REPORT/PROJECT REPORT (PSR/PR)

07 - LA - 210 - KP R39.99/R40.77
(PM R24.64/R25.29)
07373 - 24340K
2004 SHOPP (201.170)
November, 2003

This Project Study Report/Project Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.


REGISTERED CIVIL ENGINEER

11/21/03
DATE



PROJECT STUDY REPORT/PROJECT REPORT (PSR/PR)

1. INTRODUCTION

The purpose of this Project Study Report/Project Report (PSR/PR) is to replace the existing fluorescent lights with high-pressure sodium vapor lights in two tunnels on the eastbound Route 210 (Foothill) Freeway and in one tunnel on the westbound Route 210 Freeway at the Route 134/210/710 Freeway Interchange. The project will enhance safety and improve operations inside the tunnels by improving visibility during daylight hours. It will also reduce maintenance costs and reduce Maintenance personnel's exposure to oncoming traffic by decreasing repair and maintenance efforts of the tunnel lighting. It is proposed to include this project in the 2004 State Highway Operation and Protection Program (SHOPP) as part of the Signs and Lighting Rehabilitation Program (201.170). The current capital cost of this project is estimated at \$1,950,000 in 2003 dollars.

2. BACKGROUND

The Foothill Freeway (Route 210) within the project limits is a major route that is used for both commuting and the shipping of goods. It connects with Routes 134 and 710 within the project limits. To the west of the freeway interchange, Route 210 runs in a north-south direction. To the east of the interchange, it runs east west. The southbound portion of the freeway goes through two tunnels as it moves from a southbound to an eastbound direction. The westbound connector to southbound Route 710 goes through one tunnel. All three tunnels are in cut sections and on horizontal curves (see Attachment 1 – Location Map and Attachment 2 – Aerial Photograph). Existing horizontal and vertical clearances are shown on Attachment 5.

Fluorescent lighting fixtures on both sides of each of the tunnels provide current illumination. Due to the orientation of the tunnels, there is little natural light available to supplement the existing lights. During the day, drivers slow abruptly when entering the tunnels due to the contrast in lighting (see Attachment 3 – Field Photograph). The slowing causes traffic congestion upstream and can contribute to congestion-related collisions. In addition, maintenance of the lights requires lane or connector closures, resulting in significant traffic delays. In order to reduce the occurrence of abrupt slowing near the tunnel entrances and to reduce Maintenance exposure, replacement of the existing tunnel lights with high-pressure sodium vapor lights, or other lighting that meet current standards, is proposed.

3. NEED AND PURPOSE

There is an extreme difference during the daytime between the light intensity inside and outside of the tunnels. Most drivers react to this difference by slowing as they enter the tunnels. This action contributes to reduced capacity, increased congestion, and congestion-related accidents. The accident rate for the southbound 210 to eastbound 210 connector is over three times higher than the statewide average for similar facilities. The accident rate for the westbound 210 to southbound 710, which has much lower traffic volumes, is about equal to the

statewide average (see Attachment 4 –Accident Rate Calculations).

Improvement of the lighting within the tunnels will reduce the occurrence of abrupt slowing near the tunnel entrances and allow a driver to maintain a consistent speed throughout the connector. This should result in reduced rear-end and sideswipe collisions outside of the normal commute periods. Improved lighting will also require less repair and maintenance resulting in fewer lane or connector closures and decrease exposure to traffic by Maintenance personnel.

4. ALTERNATIVES

A. Alternative A – No Build

This alternative is not consistent with Caltrans policy since it will not improve safety or operation, will not reduce delays caused by connector or lane closures for maintenance of lighting, and will not reduce exposure of Caltrans maintenance workers to high-speed traffic.

B. Alternative B – Minimum Build Alternative

There is no alternative that is considered “minimum build”

C. Alternative C – Replace Tunnel Lighting

This alternative consists of upgrading the existing tunnel lights on the connector from southbound to eastbound Route 210 and the connector from westbound Route 210 to Southbound Route 710. The alternative will replace existing fluorescent lighting in the tunnels with lighting that will meet current tunnel lighting design standards as presented in RP-22 American National Standard for Tunnel Lighting (see Attachment 5 Existing and Proposed Conditions).

This alternative should improve safety and operations, reduce delay, and reduce exposure of Caltrans maintenance workers to traffic.

The construction cost is estimated at \$1,950,000 (see Attachment 6 – Preliminary Project Cost Estimate).

This alternative will not require the approval of a design exception. The alternative is for replacement of the lighting fixtures only and does not create any new nonstandard design features.

5. SYSTEM AND REGIONAL PLANNING

The freeway is designated as Route 210 and is included in the State Freeway and Expressway System. This project is consistent with the goals and objectives of the 2001 Regional Transportation Plan (RTP that was prepared by the Southern California Association of Governments and approved by the U.S. Department of Transportation on June 8, 2001.

This project is a safety improvement project and will have no impact on regional emissions. Projects of this type are identified in the Environmental Protection Agency Transportation Conformity Rule category of exempt projects, Table 240 CFR section 93.127 The proposed project is identified in the Regional Transportation Improvement Program (2002/2003 – 2007/2008), approved October 4, 2002.

ENVIRONMENTAL DETERMINATION AND ENVIRONMENTAL ISSUES

The project is a category 5 project on the basis of definitions under Category 5 in Chapter 8, Section 5 of the Project Development Procedures Manual and the findings of the Division of Environmental Planning that this project is categorically exempt under Class 1 of the Caltrans Environmental Regulations (see Attachment 7 – Categorical Exemption).

Based on a prior Site Investigation Report, there is evidence of aerially deposited lead in the unpaved shoulder areas of the freeway. There may be excavation of these areas for installation of new conduits; however, the excavation is considered a minor soil disturbance and does not require a Site Investigation. The contractor shall be required to prepare a Lead Compliance Plan (see Attachment 8 – Hazardous Waste Clearance).

The project will have no impact on water quality based on the assessment guidelines in Section 110.2(1) of the Highway Design Manual. A Water Pollution Control Check List is included as Attachment 11.

6. RIGHT OF WAY

All proposed work is within State right of way. No additional right of way is required (see Attachment 9 – Right of Way Data Sheet).

7. OTHER CONSIDERATIONS

Transportation Management Plan for Use During Construction

All construction is anticipated to require only shoulder closures with the use of temporary railing. The construction work is not expected to cause significant traffic delays or a significant increase in the existing recurrent delays over an extended period. A TMP has been prepared and is included as Attachment 10.

8. FUNDING AND SCHEDULING

This project is a candidate for the 2004 State Highway Operation and Protection Program (SHOPP) as part of HA22, coding 201.170, Sign and Lighting Rehabilitation. The estimated cost of construction is \$1,950,000.

Project Schedule

PAED	9-2004
PS&E	5-2006
R/W Certification	7-2006
Ready To List	7-2006
Advertisement and Award	8-2006
Construction Start	10-2006
Complete Construction	7-2007
Working Days	240 days

Project Support Cost

Project Support Cost											
FY	District PY's				Engineering Service Center PYS						
					Structures		METS and Others		OE Office	FY total PY's	Other Costs (\$)
	Design	R/W	Cons	Env	Design	Cons	Design	Cons			
04/05	0.23	0	0	0.08	0	0			0.21	0.52	55640
05/06	0.62	0	0	0	0	0			0.01	0.63	67410
06/07	0.47	0	0	0	0	0				0.47	50290
07/08	0	0	0.09	0	0	0				0.09	9630
08/09	0	0	0.04	0	0	0				0.04	4280
										1.75	187250

9. REVIEWS

This project was discussed with Jerry Champa, Caltrans Headquarters Traffic Liaison, in May 2003, who concurred with the proposal.

Jim DeLuca, Headquarters Division of Design, reviewed this document, and all comments regarding design standards have been addressed.

10. PROJECT PERSONNEL

Robert Masuda, Project Supervisor
Office of Traffic Investigations

213-897-0223
Calnet 647-0223

Michele Markota, Project Engineer
Office of Traffic Investigations

213-897-0477
Calnet 647-0477

John Lee, Project Manager
Office of Project Management

213-897-8623
Calnet 647-8623

Yi Tsau, Design Engineer
Office of Traffic Design

213-897-4656
Calnet 647-4656

11. RECOMMENDATION

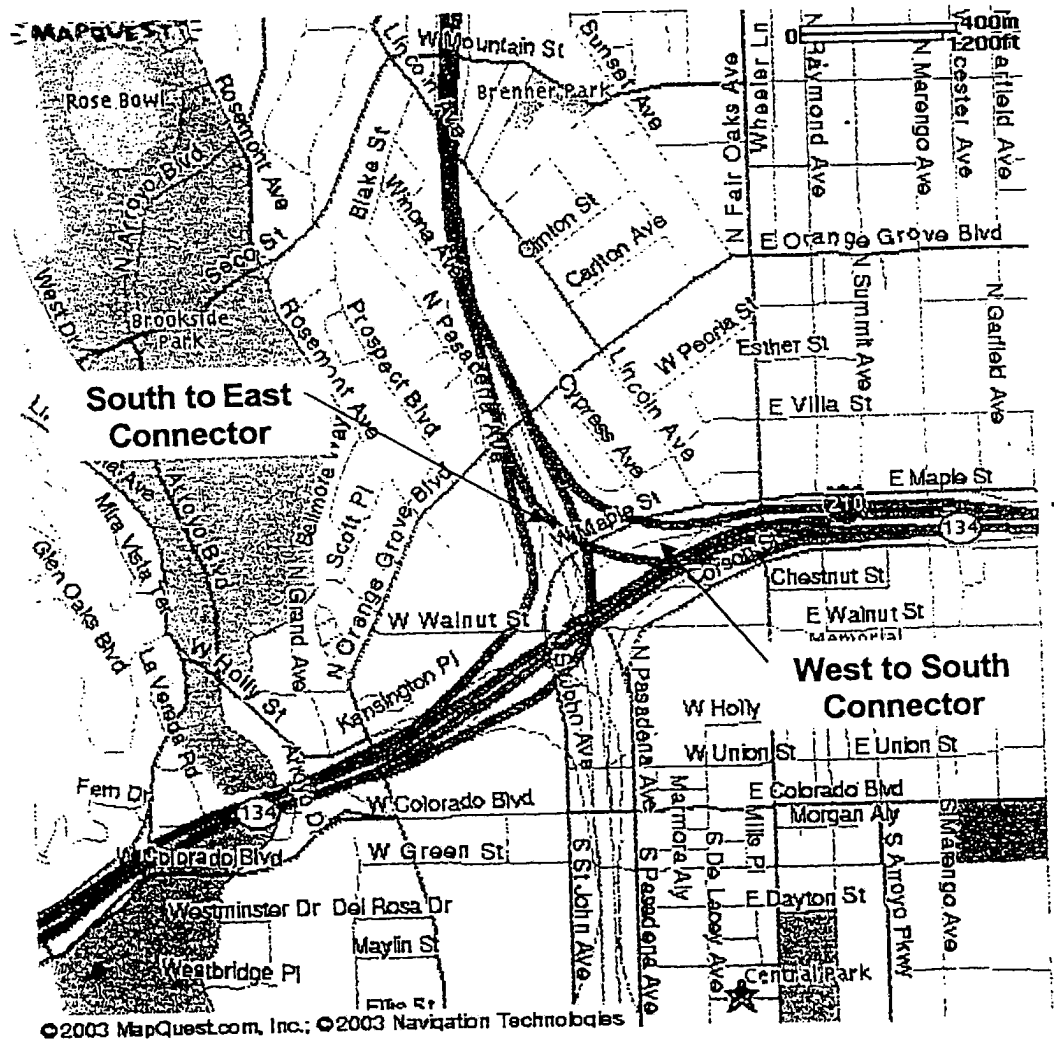
It is recommended that, to improve safety and operations, approval be granted for this project to replace the existing fluorescent lights in the three tunnels on Route 210 at the 134/210/710 Interchange in Los Angeles County with lighting that meets current tunnel lighting design standards as described in Alternative C.

12. ATTACHMENTS

1. Location Map
2. Aerial Photograph
3. Field Photographs
4. Accident Rate Calculations
5. Existing and Proposed Conditions
6. Preliminary Project Cost Estimate
7. Categorical Exemption
8. Hazardous Waste Clearance
9. Right of Way Data Sheet
10. Transportation Management Plan Data Sheet
11. Water Pollution Control Check List
12. Work Plan and Resources
13. Performance Measures

PROJECT STUDY REPORT/PROJECT REPORT

07-LA-210-KP
R39.99/R40.77
(PM R24.64/R25.29
07373 - 24340K
HA-22 (201.170) - SHOPP



LOCATION MAP
ROUTE 134/210/710 Interchange

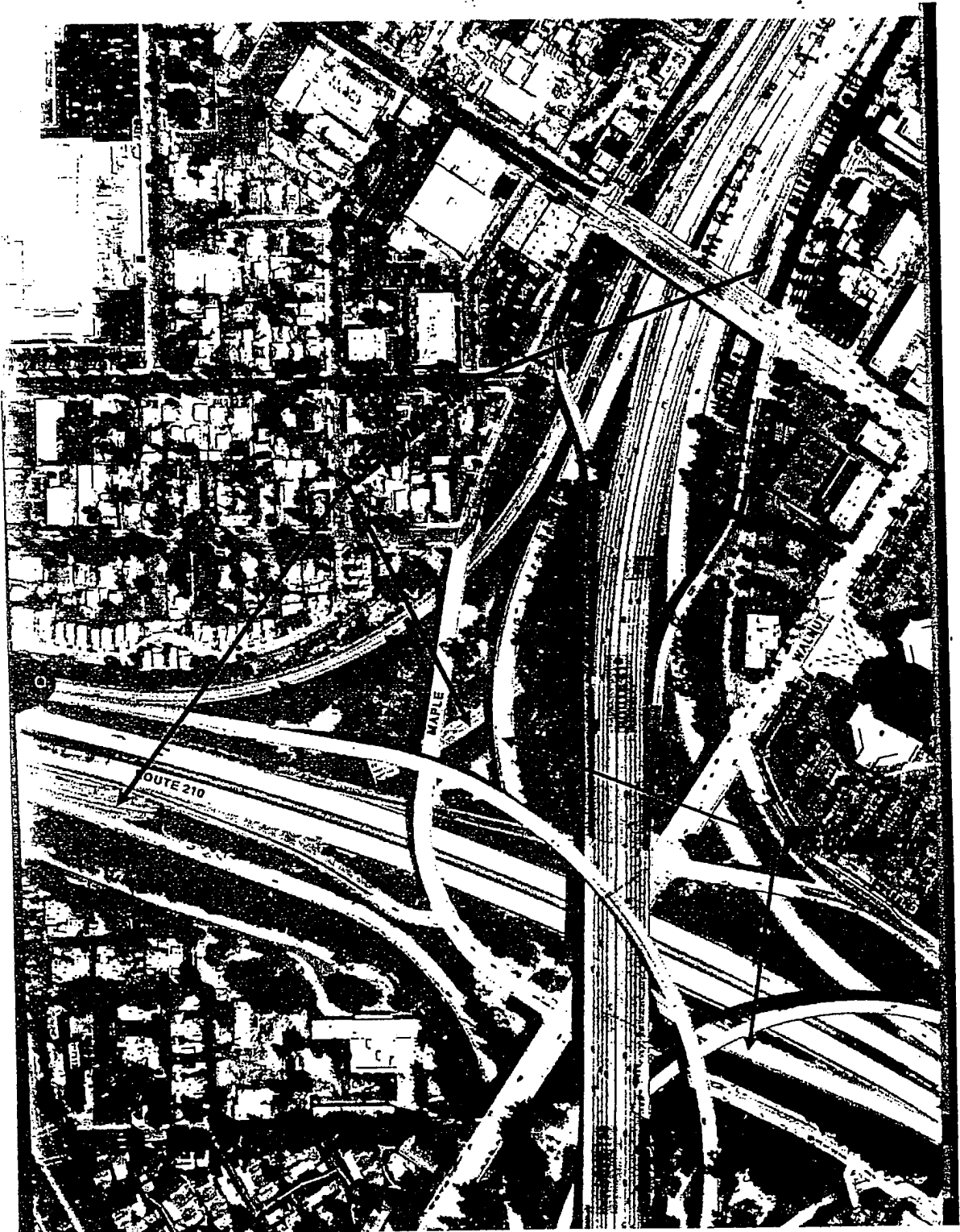
PROJECT STUDY REPORT/PROJECT REPORT

07-LA-210-KP R39.99/R40.77

(PM R24.64/R25.29

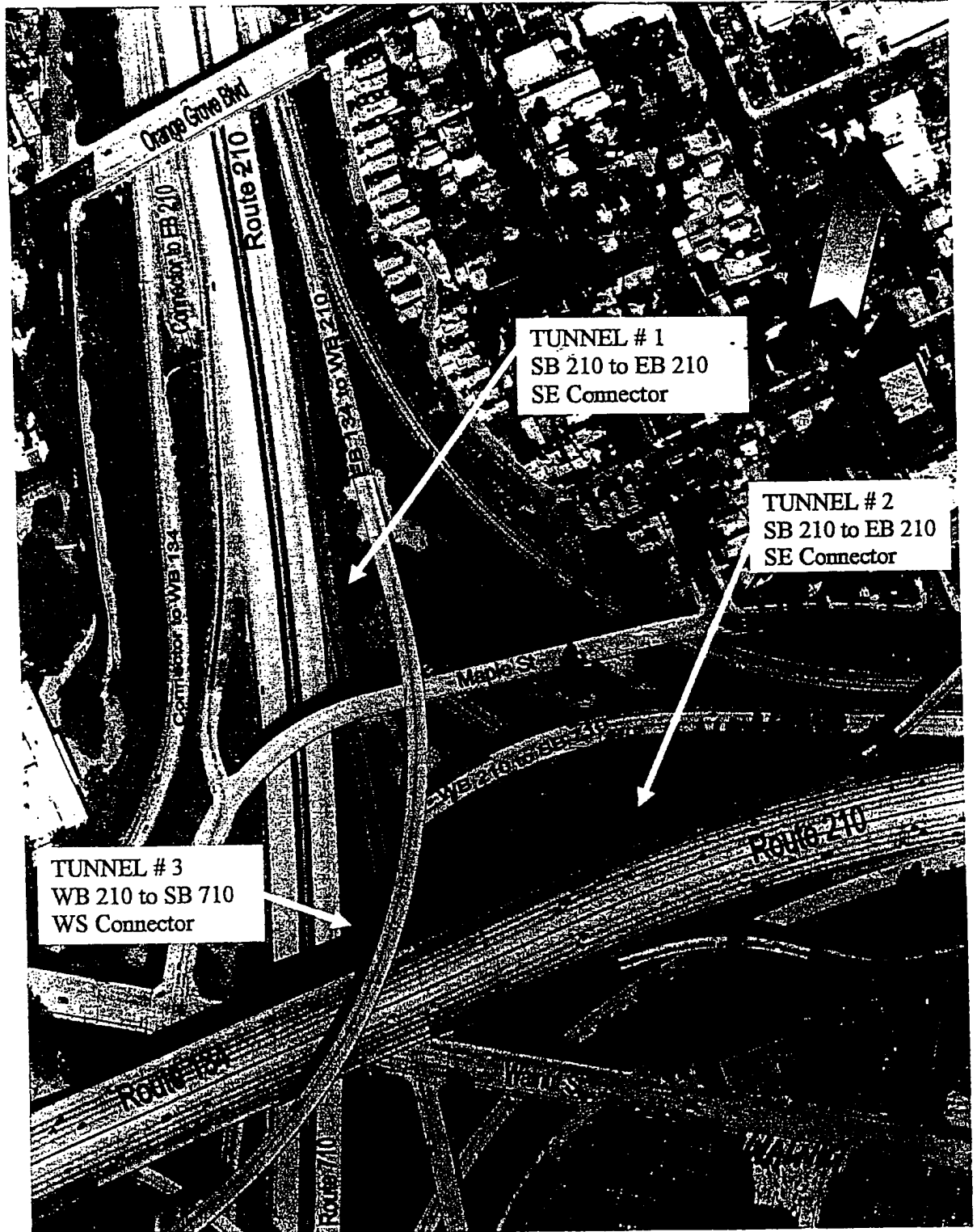
07373 - 24340K

HA-22 (201.170) - SHOPP



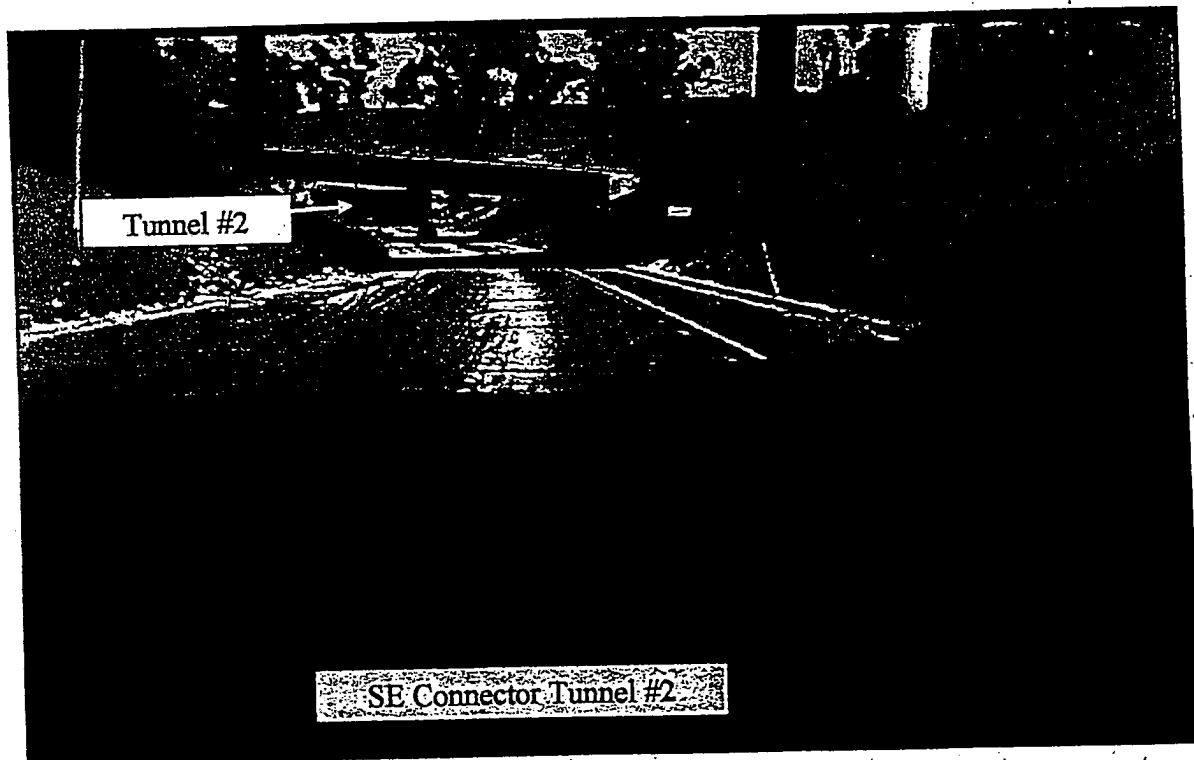
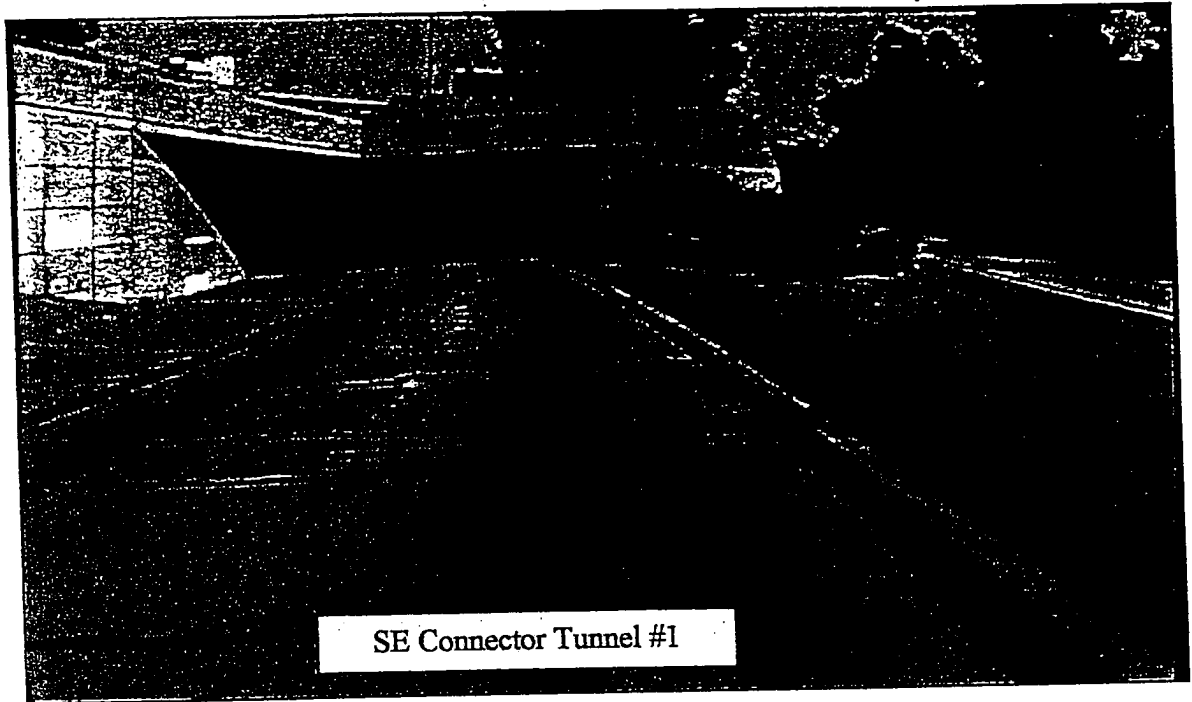
PROJECT STUDY REPORT/PROJECT REPORT

07-LA-210-KP R39.99/R40.77
(PM R24.64/R25.29
07373 - 24340K
HA-22 (201.170) - SHOPP



PROJECT STUDY REPORT/PROJECT REPORT

07-LA-210-KP
R39.99/R40.77
(PM R24.64/R25.29
07373 - 24340K
HA-22 (201.170) - SHOPP



PROJECT STUDY REPORT/PROJECT REPORT

07-LA-210-KP
R39.99/R40.77
(PM R24.64/R25.29
07373 - 24340K
HA-22 (201.170) - SHOPP

TASAS TABLE B SELECTIVE ACCIDENT RATE CALCULATIONS

LOCATION DESCRIPTION	RA GRP (RUS)	NUMBER OF ACCIDENTS/SIGNIFICANCE							PER	ADT MAIN X1000	TOTAL	ACCIDENT RATE - ACCS/MVM					
		TOT	FAT	INJ	F+	MULTI VEH	WET	DARK	KLD		MVM	ACTUAL			AVERAGE		
									INJ			FAT	F+	TOT	FAT	F+	TOT
LA-210 PM R24.058 THRU R24.689 South to East Connector 4/1/99 - 3/31/02	H	102	0	33	33	83	15	30	0 49	63.0	43.61	.000	0.76	2.34	.003	0.21	.070
	(U)																
LA-210 PM R25.253 WB 210 to SB 710 4/1/99 - 3/31/02	R06	10	0	3	3	5	5	3	0 5	16.3	17.85+	.000	0.17	0.56	.006	0.21	0.60
	(U)																

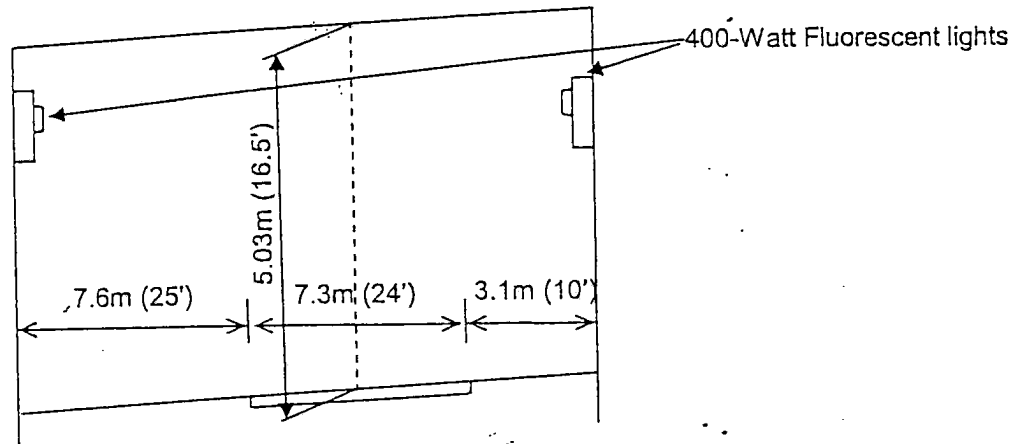
PROJECT STUDY REPORT/PROJECT REPORT

07-LA-210-KP R39.99/R40.77

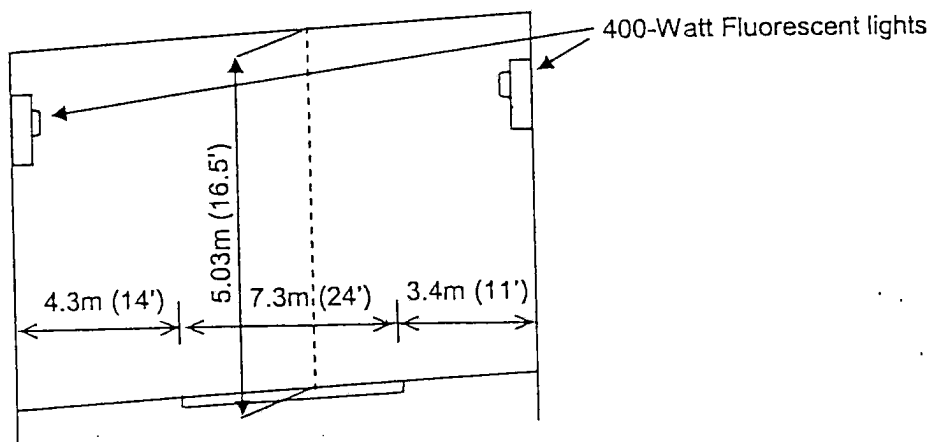
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.07373 - 24340K

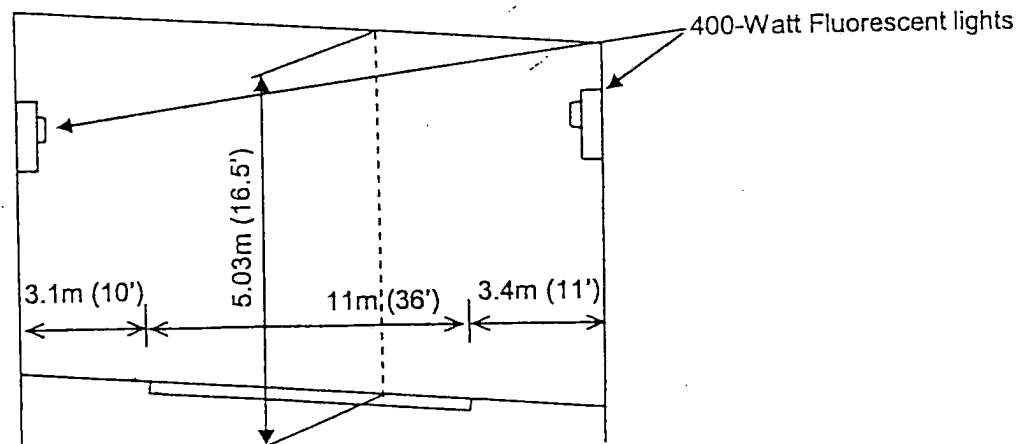
HA-22 (201.170) - SHOPP



Route 7/210 Separation
Bridge #53-2341



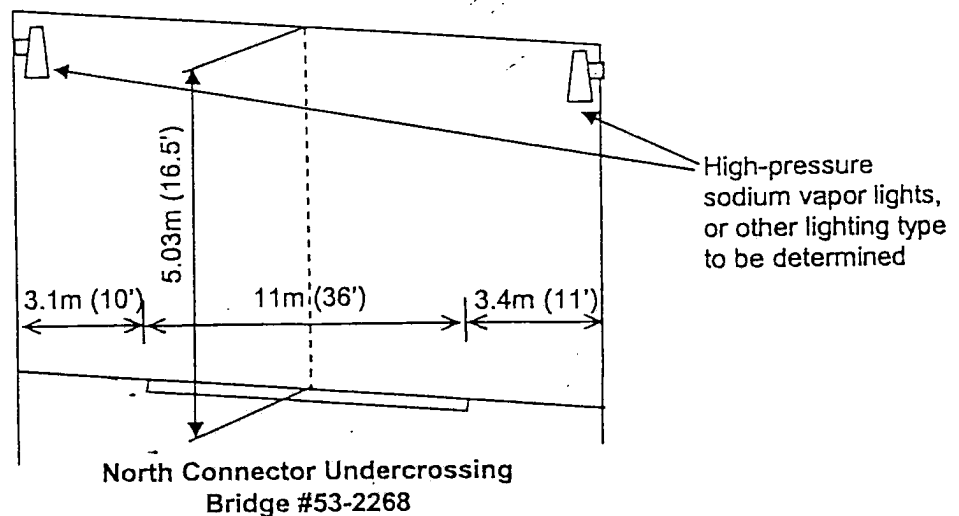
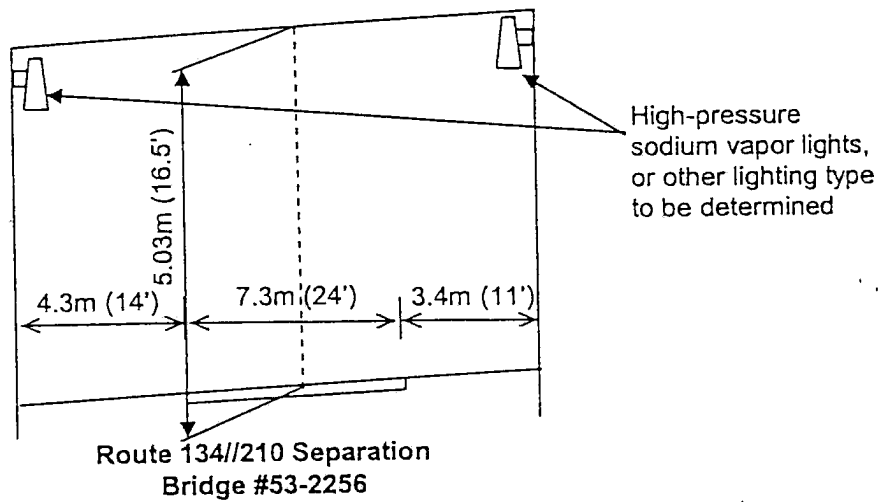
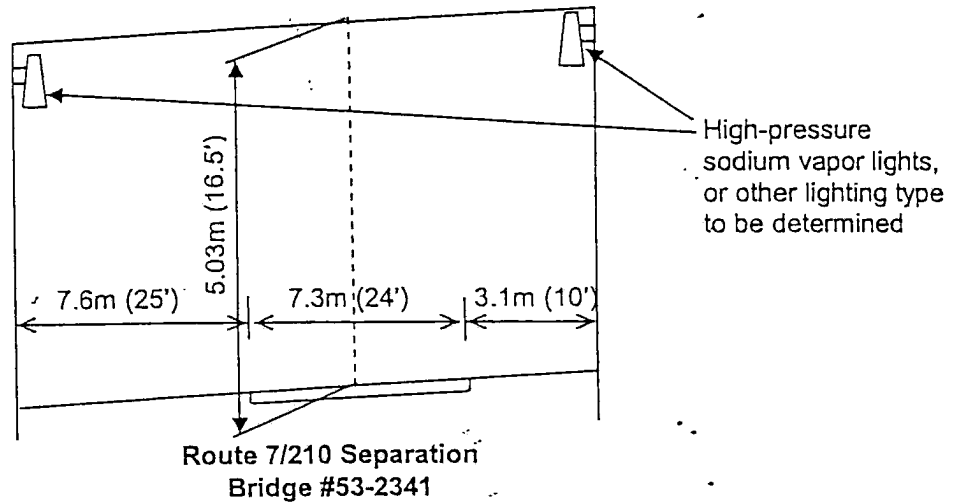
Route 134/210 Separation
Bridge #53-2256



North Connector Undercrossing
Bridge #53-2268

PROJECT STUDY REPORT/PROJECT REPORT

07-LA-210-KP R39.99/R40.77
(PM R24.64/R25.29
07373 - 24340K
HA-22 (201.170) - SHOPP



PROPOSED TUNNEL LIGHTING

ATTACHMENT !

PRELIMINARY PROJECT COST ESTIMATE SUMMARY



DIST-CO-RTE	07-LA-210
Type of Estimate (Pre-PSR, PSR, PR, etc.):	PSR/PR
Program Code:	SHOPP 2004 (201.170)
KP(PM)	R39.66/R40.70 (R24.64/R25.29)
EA	07373-24340K
PP NO.	N/A

Project Description:

Limits: Route 210 at Route 210/134/710 Interchange

Proposed Upgrade tunnel lighting
Improvement (Scope):

Alternate: NONE

TOTAL ROADWAY ITEMS	\$ 1,900,000
TOTAL STRUCTURE ITEMS	\$
SUBTOTAL CONSTRUCTION COSTS	\$ 1,900,000
RIGHT OF WAY (Current Value)	\$
TOTAL PROJECT CAPITAL OUTLAY COSTS	\$ 1,900,000
USE	\$ 1,900,000

Reviewed by
Program Manager

Luu Nguyen
Luu Nguyen

11/21/03
Date

Approved by
Project Manager

John K. Lee
John K. Lee

213-897-8623
Phone No.

Date

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST-CO-RTE	07-LA-210
KP(PM)	R39.66/R40.70
	(R24.64/R25.29)
EA	07373-24340K
PP NO.	N/A

I. ROADWAY ITEMS

<u>Section 1 Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
----------------------------	-----------------	-------------	-------------------	------------------	---------------------

Roadway Excavation					
Imported Borrow					
Clearing & Grubbing					
Develop Water Supply					

Subtotal Earthwork

Section 2 Structural Section*

PCC Pavement (.3 m depth)					
Asphalt Concrete					
Lean Concrete Base					
Aggregate Base					
Pavement Reinforcing Fabrics					
Edge Drains					

Subtotal Structural Items

Section 3 Drainage

Large Drainage Facilities					
Storm Drains					
Pumping Plants					
Project Drainage					

Subtotal Drainage

*Attach sketch showing typical structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST-CO-RTE 07-LA-210
KP(PM) R39.66/R40.70
(R24.64/R25.29)
EA 07373-24340K
PP NO. N/A

Section 4 Specialty Items

	Quantity	Unit	Unit Price	Unit Cost
Retaining Walls				
Noise Barriers				
Barriers and Guardrails				
Equipment/Animal Passes				
Highway Planting				
Replacement Planting				
Irrigation Modification				
Relocate Private Irrigation Facilities				
Erosion Control				
Slope Protection				
Water Pollution Control				
Hazardous Waste Mitigation				
(Lead Compliance Plan)	1	LS	\$4,500.00	\$4,500
Environmental Mitigation				
Resident Engineer's Office Space				

Subtotal Specialty Items \$4,500

Section 5 Traffic Items

Lighting	1	LS	\$1,250,000.00	\$1,250,000
Traffic Delineation				
Traffic Signals				
Overhead Sign Structures				
Roadside Signs				
Traffic Control Systems	1	LS	\$150,000.00	\$150,000
Transportation Management Plan	1	LS	\$15,000.00	\$15,000
Construction Area Signs	1	LS	\$30,000.00	\$30,000

Subtotal Traffic Items \$1,445,000

SUBTOTAL SECTIONS 1-5 \$1,449,500

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

				DIST-CO-RTE	07-LA-210
					R39.66/R40.70
				KP(PM)	(R24.64/R25.29)
				EA	07373-24340K
				PP NO.	N/A
<u>Section 6 Minor Items</u>					
Subtotal Sections 1-5	<u>\$1,449,500</u>	X	<u>5.00%</u> (5% - 10%)	<u>Unit Cost</u> <u>\$72,475</u>	<u>Section Cost</u>
<u>Section 7 Roadway Mobilization</u>				TOTAL MINOR ITEMS	<u>\$72,475</u>
Subtotal Sections 1-5	<u>\$1,449,500</u>				
Minor Items	<u>\$72,475</u>				
Sum	<u>\$1,521,975</u>	X	<u>10.00%</u> (5% - 10%)	<u>\$152,198</u>	
<u>Section 8 Roadway Additions</u>				TOTAL ROADWAY MOBILIZATION	<u>\$152,198</u>
Supplemental					
Subtotal Sections 1-5	<u>\$1,449,500</u>				
Minor Items	<u>\$72,475</u>				
Sum	<u>\$1,521,975</u>	X	<u>5.00%</u> (5% TO 10%)	<u>\$76,099</u>	
Contingencies					
Subtotal Sections 1-5	<u>\$1,449,500</u>				
Minor Items	<u>\$72,475</u>				
Sum	<u>\$1,521,975</u>	X	<u>10.00%</u> ()*	<u>\$152,198</u>	
TOTAL ROADWAY ADDITIONS					<u>\$228,296</u>
TOTAL ROADWAY ITEMS (Total of sections 1-8)					<u>\$1,902,469</u>
USE					<u>\$1,900,000</u>

*Use appropriate Percentage per Chapter 3-50 of Project Development Procedures Manual.

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST-CO-RTE	07-LA-210
KP(PM)	R39.66/R40.70
	(R24.64/R25.29)
EA	07373-24340K
PP NO.	N/A

II. STRUCTURES ITEMS

	No. 1	No. 2	No. 3	No. 4
Bridge Name				
Structure Type				
Width (out to out) - (m)				
Span Lengths - (m)				
Total Area - (m ²)				
Footing Type (Pile/Spread)				
Cost Per m ² (include 10% mobilization and 20% contingency)				
Total Cost for Structure	N/A			
Removal Cost				

SUBTOTAL STRUCTURES ITEMS N/A

Railroad Related Costs _____

SUBTOTAL RAILROAD ITEMS _____

TOTAL STRUCTURES ITEMS N/A

USE _____

COMMENTS:

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST-CO-RTE 07-LA-210
R39.66/R40.70
KP(PM) (R24.64/R25.29)
EA 07373-24340K
PP NO. N/A

III. RIGHT OF WAY

	Current Values (Future Use)	Escalation Rates	Escalated Values*
A. Acquisition, including excess lands, damages to remainder(s), and Goodwill	_____	_____	_____
B. Utility Relocation (State share)	_____	_____	_____
C. Clearance/Demolition	_____	_____	_____
D. RAP	_____	_____	_____
E. Title and Escrow Fees	_____	_____	_____
F. CONSTRUCTION CONTRACT WORK	_____	_____	_____
TOTAL RIGHT OF WAY (CURRENT VALUES)**	_____	TOT. ESC. R/W	_____
Use	_____		

*Escalated to assumed year of advertising of

**Current total value for use on sheet 1 of 6

Estimate Prepared By Michele Markota 213-897-0477 _____
(Print Name) Phone # Date

Estimate Checked By Robert Masuda 213-897-0223 _____
(Print Name) Phone # Date

(If appropriate, attach additional pages and backup)

**CATEGORICAL EXEMPTION
CATEGORICAL EXCLUSION/PROGRAMMATIC CATEGORICAL EXCLUSION
DETERMINATION FORM**

07-LA-210	R39.66/R40.70	243400	200310022
Dist.-Co.-Rte. (or Local Agency)	K.P (P.M.)	E.A. (State project)	CE Number
PROJECT DESCRIPTION: (Briefly describe project, purpose, location, limits, right-of-way requirements, and activities involved.)			
The proposed project would upgrade the tunnel lighting system in three (3) tunnels of the Interstate 210/State Route 134/Interstate 710 Interchange in the City of Pasadena, Los Angeles County. The proposed project will replace conduit, conductors, electrical service and light fixtures. Aerially deposited lead (ADL) is present in unpaved areas of the freeway. See continuation sheet for detailed environmental conditions of this CE.			

CEQA COMPLIANCE (for State Projects only)

Based on an examination of this proposal, supporting information, and the following statements (See 14 CCR 15300 at seq.):

- If this project falls within exempt class 3, 4, 5, 6 or 11, it does not impact an environmental resource of hazardous or critical concern where designated, precisely mapped and officially adopted pursuant to law.
- There will not be a significant cumulative effect by this project and successive projects of the same type in the same place, over time.
- There is not a reasonable possibility that the project will have a significant effect on the environment due to unusual circumstances.
- This project does not damage a scenic resource within an officially designated state scenic highway.
- This project is not located on a site included on any list compiled pursuant to Govt. Code § 65962.5 ("Cortese List").
- This project does not cause a substantial adverse change in the significance of a historical resource.

CALTRANS CEQA DETERMINATION

☐ Exempt by Statute (PRC 21080)

Based on an examination of this proposal, supporting information, and the above statements, the project is:

☒ Categorically Exempt, Class 1(f)(3), or General Rule exemption (This project does not fall within an exempt class, but it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment (CCR 15061(b)(3)))


Signature: Environmental Office Chief

11/19/03
Date


Signature: Project Manager

11/19/03
Date

NEPA COMPLIANCE (23 CFR 771.117)

Based on an examination of this proposal, supporting information, and the following statements:

- This project does not have a significant impact on the environment as defined by the NEPA.
- This project does not involve substantial controversy on environmental grounds.
- This project does not involve significant impacts on properties protected by Section 4(f) of the DOT Act or Section 106 of the National Historic Preservation Act.
- In non-attainment or maintenance areas for Federal air quality standards: this project comes from a currently conforming plan and Transportation Improvement Program or is exempt from regional conformity.
- This project is consistent with all Federal, State, & local laws, requirements or administrative determinations relating to the environmental aspects of this action.

CALTRANS NEPA DETERMINATION

Based on an examination of this proposal, supporting information, and the statements above under "NEPA Compliance", it is determined that the project is a:

☒ PROGRAMMATIC CATEGORICAL EXCLUSION (PCE): Based on the evaluation of this project and supporting documentation in the project files, all the conditions of the September 7, 1990 Programmatic Categorical Exclusion have been met.

☐ CATEGORICAL EXCLUSION (CE): For actions that do not individually or cumulatively have a significant environmental effect and are excluded from the requirement to prepare an Environmental Assessment (EA) or Environmental Impact Statement (EIS). Require FHWA determination.


Signature: Environmental Office Chief

11/19/03
Date


Signature: Project Manager/DLA Engineer

11/19/03
Date

FHWA DETERMINATION

Based on the evaluation of this project and the statements above, it is determined that the project meets the criteria of and is properly classified as a Categorical Exclusion (CE).

N/A
Signature: FHWA Transportation Engineer

Date

Additional information attached or referenced, as appropriate (e.g. Mitigation commitments for NEPA only; Air Quality studies or documentation of exemption from regional conformity or use of CO Protocol; §106 commitments; §4(f) or Programmatic §4(f); date of COE nationwide permit; § 7 species survey results; Wetlands Finding; Floodplain Finding; additional studies; design conditions. Rev. 4/2001

CATEGORICAL EXEMPTION
CATEGORICAL EXCLUSION/PROGRAMMATIC CATEGORICAL EXCLUSION
DETERMINATION FORM

PROJECT DESCRIPTION CONTINUATION SHEET

Hazardous Materials Conditions:

1. The Contractor shall prepare a project specific Lead Compliance Plan in accordance with the attached Special Provisions to prevent or minimize worker exposure to lead in the soil.

Cultural Resources Conditions:

1. If during project construction cultural materials appear, all work will stop in the immediate area. The District 7 Cultural Resources Staff will be immediately notified upon such discovery and appropriate measures will be performed to mitigate the impacts to the resource. Work may only resume with approval from the Caltrans Archaeologist.

Memorandum

To : Robert Masuda
Office of Traffic Investigations

Attn: Michele Markota

Date: October 20, 2003

File: LA-210, KP 39.66/40.70
Safety Improvements
Orange Grove O/C to Fair Oaks O/C
EA# 243400

From: DEPARTMENT OF TRANSPORTATION
OEFPS - HAZARDOUS WASTE BRANCH
NORTH REGION - MS 16

Subject: Hazardous Waste Assessment

This is in response to your memo dated September 29, 2003 requesting a hazardous waste assessment for the above safety improvement project to replace the existing fluorescent lighting which includes new conduit, conductors, electrical service and removal of the existing lighting system in three tunnels around the Route 210 Freeway. Our comments are as follows:

The Site Investigation Report (SIR) prepared by PSI Consultants dated June 2001 performed for a widening project within the same corridor of the above referenced project indicated aerially deposited lead (ADL) in the unpaved shoulder areas of the freeway. The installation of traffic operation systems that require excavation in unpaved areas of the freeway, however, are considered minor soil disturbance which does not require a Site Investigation (SI) provided the excavated material remain within Caltrans right of way.

The Contractor shall prepare a project specific Lead Compliance Plan in accordance with the attached Special Provisions to prevent or to minimize worker exposure to lead in the soil. Based on Headquarters recommendation, an estimated budget of \$4,500.00 should be allocated for the lump sum cost of the Contractor's Lead Compliance Plan.

If you have any questions or require additional information, please call me at Ext. 7-0670 or June Obayashi of my staff at Ext. 7-3808.



Ayubur Rahman, STE
Hazardous Waste Coordinator - North Region

Attachment

cc: Garrett Damrath
Environmental Planner

TO Bob Masuda (Acting)
 ATTN Michele Martore
 PHONE 213-887-0477
 SENIOR RAW P&M Jorge Cabrera
 ROUTE LA-210
 PM_XM PM: R24.84/R25.29 KP: R38.99/R40.77
 EA 24340k
 ALT

RW DATA SHEET

WBS
 REVISED
 UPDATED
 DATE 9/30/2003
 ID NO
 779
 PROJ_DESC Remove existing fluorescent lighting in 3 tunnels and replace with type to be determined by HQ Structures Electrical. New service, conduit and conductors, and removal of existing lighting system are included in project.

This cost estimate is pursuant to the following statements which are based on information provided by Bob Masuda (Acting).

This cost estimate is valid for the above scoping report only. This is an estimate only and not an appraisal. It may be based on worse case scenarios. The estimate is subject to change and revision.

The mapping did not provide sufficient nor adequate detail to determine the limits of the Right of Way required and effects on the improvements.

The transportation facilities have not been sufficiently designed for our estimator to determine the damages to any of the remainder parcels affected by the project.

Residential displacement is not involved.

Utility facilities or Utility Right of Way are not affected.

Railroad facilities or R.R. Right of Way are not affected.

It is not known at this time whether there are any material borrow and/or disposal sites are required.

There are no potential relinquishments and/or abandonments.

Time constraints precluded a detailed cost estimate.

The time schedule provided by the requesting party allowed for a field inspection.

RW COST ESTIMATE

	CURRENT VALUE	ESCALATED VALUE
R/w acq.(Incl.contingency G.w-condem.-adm.s'd.)Permits	NONE	NONE
Clearance	NONE	NONE
RAP (cont rate.)	NONE	NONE
Escrow costs (cont rate.)	NONE	NONE
Utility relocation costs	NONE	NONE
Total estimated cost	NONE	NONE

NO RIGHT OF WAY

ESCALATION RATE RW .07
 ESCALATION RATE Utilities

CERT.DATE 8/1/06
 Date of this Data Sheet 10/9/03
 YEARS TO CERT DATE 2.84

PARCEL TYPES	DUAL APPR.
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
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81	81
82	82
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85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

A		
B		
C		
D		
F		
W		

PER	
EASE	
TCH	

FULL	
PART	
TOTAL	

SFR	
MULTI	
GLS	

6

11

1

not known at this time.

•	BY	HOURS

Are Utilities affected: no

Estimated Costs

[illegible]

TOTAL CURRENT COST NONE

Are utility assessments required

No. of assessments

Are Utility agreements required

CONST. COMPLETION DATE

Types of UTL Facilities & permits required	Description
1. <u>Small</u>	Small UTL facilities are those that have a maximum capacity of 10,000 gallons of UTL storage and are used for the storage of UTL for the purpose of testing, research, or development.
2. <u>Medium</u>	Medium UTL facilities are those that have a maximum capacity of 100,000 gallons of UTL storage and are used for the storage of UTL for the purpose of testing, research, or development.
3. <u>Large</u>	Large UTL facilities are those that have a maximum capacity of 1,000,000 gallons of UTL storage and are used for the storage of UTL for the purpose of testing, research, or development.
4. <u>Very Large</u>	Very Large UTL facilities are those that have a maximum capacity of 10,000,000 gallons of UTL storage and are used for the storage of UTL for the purpose of testing, research, or development.

UTILITY ESCALATION RATE

ESCALATED VALUE TO
UTILITY CONSTRUCTION
COMPLETION DATE

Are RR affected

Describe affected RR	None
----------------------	------

WHEN BRANCH LINES OR SPURS ARE AFFECTED, WOULD ACQUISITION AND/OR PAYMENT OF DAMAGES TO BUSINESSES AND/OR INDUSTRIES SERVED BY THE RAILROAD FACILITY BE MORE COST EFFECTIVE THAN SERVICE CONTRACTS, OR GRADE SEPARATIONS REQUIRING CONSTRUCTION AND MAINTENANCE AGREEMENTS INVOLVED?

Explain Branch Lines

DISCUSS TYPES OF AGREEMENTS AND RIGHTS REQUIRED FROM THE RAILROADS. ARE GRADE CROSSING REQUIRING SERVICE CONTRACTS, OR GRADE SEPARATIONS REQUIRING CONSTRUCTION AND MAINTENANCE AGREEMENTS INVOLVED.

ESTIMATED COST TO THE STATE FOR ALL R.R. INVOLVEMENTS.

Right of Way Estimate prepared by VICTOR LEE

Railroad Estimate prepared by Bob Thorpe

Utilities Estimate prepared by Busch Mateo

SRL R/W Agent Jorge Cabrera

Project Manager _____

DATE

10/18/03

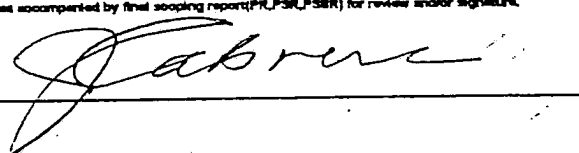
10/3/03

10/28/03

I have personally reviewed this R/W Data Sheet and all supporting information I certify that the probable highest and best use estimated values and assumptions are reasonable and proper subject to the limiting conditions set forth and I find this Data Sheet complete and current.

This Data Sheet is not to be signed by Chief unless accompanied by final staking report(PRI,PSR,PSBR) for review and/or signature.

CHIEF



12/4/03

TRANSPORTATION MANAGEMENT PLAN DATA SHEET

(Preliminary TMP Elements and Costs)

Co/Rte/PM LA-210-KP 39.66/40.70 (24.64/25.29) EA: 24340K Alternative No. None
 Project Limit From Route 210 EB connector to Route 210 EB
 Project Description Upgrade Tunnel Lighting

1) Public Information

- | | | | |
|-------------------------------------|---|----|--|
| <input type="checkbox"/> | a. Brochures and Mailers | \$ | |
| <input checked="" type="checkbox"/> | b. Press Release | | |
| <input type="checkbox"/> | c. Paid Advertising | \$ | |
| <input type="checkbox"/> | d. Public Information Center/Kiosk | \$ | |
| <input type="checkbox"/> | e. Public Meeting/Speakers Bureau | | |
| <input type="checkbox"/> | f. Telephone Hotline | | |
| <input checked="" type="checkbox"/> | g. Internet | | |
| <input type="checkbox"/> | h. Others <u>Meeting Room and Incidentals</u> | \$ | |

2) Motorists Information Strategies

- | | | | |
|--------------------------|--|----|--|
| <input type="checkbox"/> | a. Changeable Message Signs (Fixed) | \$ | |
| <input type="checkbox"/> | b. Changeable Message Signs (Portable) | \$ | |
| <input type="checkbox"/> | c. Ground Mounted Signs | \$ | |
| <input type="checkbox"/> | d. Highway Advisory Radio | \$ | |
| <input type="checkbox"/> | e. Caltrans Highway Information Network (CHIN) | | |
| <input type="checkbox"/> | f. Others _____ | \$ | |

3) Incident Management

- | | | | |
|-------------------------------------|--|----|--------|
| <input checked="" type="checkbox"/> | a. Construction Zone Enhanced Enforcement Program (COZEEP) | \$ | 15,000 |
| <input type="checkbox"/> | b. Freeway Service Patrol | \$ | |
| <input checked="" type="checkbox"/> | c. Traffic Management Team | | |
| <input type="checkbox"/> | d. Helicopter Surveillance | \$ | |
| <input type="checkbox"/> | e. Traffic Surveillance Stations (Loop Detector and CCTV) | \$ | |
| <input type="checkbox"/> | f. Others _____ | \$ | |

4) Construction Strategies

- ☒ a. Lane Closure Chart
- ☐ b. Reversible Lanes
- ☐ c. Total Facility Closure
- ☐ d. Contra Flow
- ☐ e. Truck Traffic Restrictions
- ☐ f. Reduced Speed Zone
- ☐ g. Connector and Ramp Closures
- ☐ h. Incentive and Disincentive
- ☐ i. Moveable Barrier
- ☐ j. Others _____

\$ _____
\$ _____
\$ _____
\$ _____
\$ _____

5) Demand Management

- ☐ a. HOV Lanes/Ramps (New or Convert)
- ☐ b. Park and Ride Lots
- ☐ c. Rideshare Incentives
- ☐ d. Variable Work Hours
- ☐ e. Telecommute
- ☐ f. Ramp Metering (Temporary Installation)
- ☐ g. Ramp Metering (Modify Existing)
- ☐ h. Others _____

\$ _____
\$ _____
\$ _____
\$ _____
\$ _____
\$ _____
\$ _____

6) Alternative Route Strategies

- ☐ a. Add Capacity to Freeway Connector
- ☐ b. Street Improvement (widening, traffic signal ... etc.)
- ☐ c. Traffic Control Officers
- ☐ d. Parking Restrictions
- ☐ e. Others _____

\$ _____
\$ _____
\$ _____
\$ _____
\$ _____

7) Other Strategies

- ☐ a. Application of New Technology
- ☐ b. Others _____

\$ _____
\$ _____

TOTAL ESTIMATED COST OF TMP ELEMENTS =

\$ 15,000

Project Notes:

1. Project replaces the existing fluorescecent lights with high-pressures sodium vapor lights in two tunnels on eastbound 210 freeway and in one tunnel on the westbound Route 210 freeway at the Route 134/210/710 freeway Interchange.
- 2 Public Affairs Campaign cost estimate was provided by the Caltrans Office of Public Affairs and Media Relations.
- 3 COZEEP cost estimate was provided by Construction Traffic Manager.
- 4 Currently, Freeway Patrol Service (FSP) is available on Rte.210 between 6:00 AM to 6:30 PM during weekdays. No additional FSP coverage is required..
- 5 The work shall be done in accordance with the Lane Closure Charts provided in the Maintaining Traffic Specifications.

PREPARED BY

Ramesh Patel
Ramesh Patel, Transportation Engineer

DATE

10/20/03

APPROVAL RECOMMENDED BY

Durgesh Regmi
Durgesh Regmi, TMP Coordinator-East Area

DATE

10/20/03

APPROVED BY

Ray Higa
Ray Higa, District Traffic Manager

DATE

10/23/03

ATTACHMENT

WATER POLLUTION CONTROL CHECK LIST

07-LA-210 KP R39.99/R40.77

(PM R24.64/R25.29

07373 - 24340K

HA-22(201.170) - SHOPP

Item		Yes	No	N/A	Provisions in PSR to minimize water pollution
1	Are there any waters in the vicinity of the project that may affect construction, maintenance or operational activities?		X		
2	Are there any waters (fresh, saline, underground or surface) that may be affected by the proposed construction?		X		
3	Are any affected watersheds, aquifers, well, reservoirs, lakes or streams sources for domestic water supplies?			X	
4	Are any sensitive fishery, wildlife, recreational, agricultural, or industrial aquatic resources located in the vicinity of the project?		X		
5	Is relocation or realignment possible to avoid or minimize the possibility of pollution of existing waters?			X	
6	Are there variations in the erosive characteristics of the soil that warrant consideration of relocation or grade changes to minimize erosion?			X	
7	Are there any unstable areas where the proposed construction may cause future landslides?			X	
8	Do any regulatory agencies have a construction season preference?			X	

Check list based on Section 110.2(1) of the Highway Design Manual

WBS Code	Activity Description	Team Mgr	Comp	Orig Dur	Plan Dur	Early Start	Early Finish	Late Start	Late Finish	Float
24340 LA-210-25.2R/25.2R:UPGD TUNNEL LIGHTING:JKL										
0	PROJECT MANAGEMENT	JKL	0	1,012	952	09/22/03A	10/19/07	09/22/03A	10/19/07	0
0.100	PERF PROJ MGMT	JKL	40	849	849	09/22/03A	05/23/07	09/22/03A	10/19/07	103
0.100.05	PROJ MGMT - PID	JKL	20	34*	20*	12/01/03A	01/20/04	12/01/03A	07/01/04	113
0.100.10	PROJ MGMT - PA&ED	JKL	20	3*	3*	07/02/04	07/07/04	09/27/04	09/29/04	59
0.100.15	PROJ MGMT - PS&E	JKL	20	556*	556*	07/08/04	10/02/06	09/30/04	10/02/06	0
0.100.20	PROJ MGMT - CONSTR	JKL	20	260*	260*	10/03/06	10/19/07	10/03/06	10/19/07	0
0.100.25	PROJ MGMT - R/W	JKL	20	596*	596*	07/08/04	12/01/06	09/30/04	10/19/07	220
1	PROJECT INITIATION	-	100	34	20	12/01/03A	01/20/04	12/01/03A	07/01/04	
1.150	DEV PROJ INITIATION DOC	-	0	20	20	12/01/03A	01/20/04	12/01/03A	07/01/04	113
2	PERMITS AND	-	0	176	176	12/19/03	09/01/04	09/27/04	10/19/07	776
2.160	PERF PRELIM ENGRG STUDIES	-	0	1	1	07/02/04	07/02/04	09/27/04	09/27/04	59
2.160.05	REV & UPDATE PROJ INFO	-	0	1	1	12/19/03	12/19/03	10/19/07	10/19/07	951
2.160.10	PERF ENGRG STUDIES	-	0	1	1	12/19/03	12/19/03	10/19/07	10/19/07	951
2.160.15	PREP DRAFT PROJ RPT	-	0	1	1	12/19/03	12/19/03	10/19/07	10/19/07	951
2.160.20	PROJ CONTROL	JWW	0	1	1	12/19/03	12/19/03	10/19/07	10/19/07	951
2.165	PERF ENVIRO STUDIES &	-	0	1	1	07/02/04	07/02/04	09/27/04	09/27/04	59
2.165.05	PERF ENVIRO SCOPING &	-	0	1	1	12/19/03	12/19/03	09/27/04	09/27/04	192
2.165.10	PERF GENERAL ENVIRO	-	0	1	1	12/19/03	12/19/03	09/27/04	09/27/04	192
2.165.15	PERF BIOLOGICAL STUDIES	-	0	1	1	12/19/03	12/19/03	09/27/04	09/27/04	192
2.165.20	PERF CULT RESOURCES	-	0	1	1	12/19/03	12/19/03	09/27/04	09/27/04	192
2.165.25	PREP & APPROVE DED	-	0	1	1	12/19/03	12/19/03	09/27/04	09/27/04	192
2.175	CIRCULATE DED & SELECT	-	0	1	1	07/06/04	07/06/04	09/28/04	09/28/04	59
2.175.05	CIRCULATE DED	-	0	1	1	12/19/03	12/19/03	09/28/04	09/28/04	193
2.175.10	PREP FOR & HOLD PUBLIC	-	0	1	1	12/19/03	12/19/03	09/28/04	09/28/04	193
2.175.15	RESPD TO PUBLIC COMMENTS	-	0	1	1	12/19/03	12/19/03	09/28/04	09/28/04	193
2.175.20	SELECT PREFERRED ALT	-	0	1	1	12/19/03	12/19/03	09/28/04	09/28/04	193
2.180	PREP & APPROVE PROJ RPT &	-	0	1	1	07/07/04	07/07/04	09/29/04	09/29/04	59
2.180.05	PREP & APPROVE PROJ RPT	-	0	1	1	12/19/03	12/19/03	09/29/04	09/29/04	194
2.180.10	PREP & APPROVE FNL ENVIRO	-	0	1	1	12/19/03	12/19/03	09/29/04	09/29/04	194
2.180.15	COMPLETE ENVIRO	-	0	1	1	12/19/03	12/19/03	09/29/04	09/29/04	194
2.205	OBT PERMITS/AGREEMENTS &	-	0	40	40	07/08/04	09/01/04	05/18/06	07/14/06	461
3	PLANS/ SPECIFICATIONS/ AND	-	0	692	692	12/19/03	10/02/06	09/30/04	10/19/07	260
3.185	PREP BASE MAPS & PLAN	-	0	80	80	07/08/04	10/29/04	09/30/04	01/28/05	59
3.185.05	REV & UPDATE PROJ INFO	-	0	80*	80*	07/08/04	10/29/04	09/30/04	01/28/05	59
3.185.10	PERF DSGN SURVEYS &	-	0	80*	80*	07/08/04	10/29/04	09/30/04	01/28/05	59
3.185.15	PERF PRELIM DSGN	-	0	80*	80*	07/08/04	10/29/04	09/30/04	01/28/05	59
3.185.20	PREP ENGRG RPTS	-	0	80*	80*	07/08/04	10/29/04	09/30/04	01/28/05	59
3.185.25	DETER R/W REQS	-	0	80*	80*	07/08/04	10/29/04	09/30/04	01/28/05	59
3.190	PREP STRUC SITE PLANS	-	0	1	1	07/08/04	07/08/04	04/13/06	04/13/06	436
3.210	PREP PRELIM STRUC DSGN	-	0	1	1	07/09/04	07/09/04	04/14/06	10/19/07	814
3.215	PREP STRUC GENERAL PLANS	-	0	1	1	07/09/04	07/09/04	04/14/06	04/14/06	436
3.230	PREP DRAFT PS&E	GKO	0	300	300	11/01/04	01/19/06	01/31/05	04/17/06	59
3.235	MITIGATE ENVIRO IMPACTS &	-	0	30	30	07/08/04	08/18/04	05/25/06	07/07/06	466
3.240	PREP DRAFT STRUC PS&E	-	0	1	1	07/12/04	07/12/04	04/17/06	04/17/06	436
3.250	PREP FNL STRUC PS&E PKG	-	0	1	1	07/13/04	07/13/04	05/24/06	05/24/06	462
3.255	CIRCULATE/REV & PREP FNL	-	0	60	60	12/19/03	07/13/04	03/01/06	05/24/06	462
3.260	PREP CONTRACT DOCS	BL	0	50	50	03/02/06	05/11/06	05/25/06	08/04/06	59
3.265	ADVERTISE/OPEN	BL	0	30	30	08/21/06	10/02/06	08/21/06	10/02/06	0
4	RIGHT OF WAY	-	0	599	599	07/02/04	12/01/06	04/13/06	10/19/07	220

Start Date 01/01/80
Finish Date 10/19/07
Data Date 12/19/03
Run Date 12/22/03 15:26

MODL - XT00

Sheet 1 of 2

Caltrans District 7

Dynamic Workplan Model

Classic Schedule Layout

ATTACHMENT 12

Code	Description	Mgr	Comp	Dur	Dur	Start	Finish	Start	Finish	Float
4.195	R/W PROP MGMT & EXCESS	-	0	40	40	08/05/04	09/30/04	08/23/07	10/19/07	756
4.200	COORDINATE UTIL	-	0	60	60	11/01/04	01/31/05	07/26/07	10/19/07	676
4.220	PERF R/W ENGRG	-	0	20	20	07/08/04	08/04/04	04/13/06	05/10/06	436
4.225	OBT R/W INTERESTS FOR	-	0	40	40	08/05/04	09/30/04	05/11/06	07/07/06	436
4.245	POST R/W CERTIFICATION	-	0	20	20	07/02/04	07/30/04	09/21/07	10/19/07	799
4.300	PERF FNL R/W ENGRG	-	0	40	40	10/03/06	12/01/06	08/23/07	10/19/07	220
5	CONSTRUCTION	-	0	260	260	10/03/06	10/19/07	10/03/06	10/19/07	0
5.270	PERF CONSTR ENGRG &	NC2	0	200	200	10/03/06	07/25/07	10/03/06	07/25/07	0
5.285	PREP & ADMINISTER	-	0	260	260	10/03/06	10/19/07	10/03/06	10/19/07	0
5.290	RESOLVE CONTRACT CLAIMS	-	0	260	260	10/03/06	10/19/07	10/03/06	10/19/07	0
5.295	ACPT CONTRACT/PREP FNL	-	0	60	60	07/26/07	10/19/07	07/26/07	10/19/07	0
M000	ID NEED	JKL	0	0	0		12/18/03		05/19/04	103
M010	APPROVE PID	-	0	0	0		01/20/04		07/01/04	113
M015	PROG PROJ	-	0	0	0		07/01/04*		07/01/04*	0
M020	BEGIN ENVIRO	-	0	0	0		07/01/04		09/24/04	59
M040	BEGIN PROJ	-	0	0	0		07/01/04		09/24/04	59
M120	CIRC DED	-	0	0	0		07/02/04		09/27/04	59
M200	PA&ED	-	0	0	0		07/07/04		09/29/04	59
M221	BRIDGE SITE DATA ACCEPTED	-	0	0	0		07/08/04		04/13/06	436
M222	BEGIN BRIDGE	-	0	0	0		07/08/04		04/13/06	436
M224	R/W MAPS	-	0	0	0		10/29/04		07/25/07	676
M225	REGULAR R/W	-	0	0	0		08/04/04		07/25/07	736
M275	GENERAL PLANS	-	0	0	0		07/09/04		04/14/06	436
M300	CIRC PLANS IN DIST	-	0	0	0		01/19/06		04/17/06	59
M318-D	DESIGN SAFETY REVIEW	-	0	0	0		01/19/06		04/17/06	59
M328-D	CONSTRUCTABILITY REVIEW	-	0	0	0		01/19/06		04/17/06	59
M377	PS&E TO DOE	-	0	0	0		01/19/06		04/17/06	59
M378	DRAFT STRUC PS&E	-	0	0	0		07/12/04		04/17/06	436
M380	PROJ PS&E	-	0	0	0		03/01/06		05/24/06	59
M410	R/W CERT	-	0	0	0		09/30/04		07/07/06	436
M460	RTL	-	0	0	0		07/07/06*		07/07/06*	0
M480	HQ ADVERT	BL	0	0	0		08/18/06		08/18/06	0
M500	APPROVE CONTRACT	BL	0	0	0		10/02/06		10/02/06	0
M588-D	FINAL SAFETY REVIEW	-	0	0	0		07/25/07		07/25/07	0
M600	CONTRACT ACCEPT	-	0	0	0		07/25/07		07/25/07	0
M700	FINAL REPORT	-	0	0	0		10/19/07		10/19/07	0
M800	END PROJ	JKL	0	0	0		10/19/07		10/19/07	0

REPORT DATE 22DEC03 RUN NO. 78
15:16

RESOURCE LOADING REPORT

START DATE 01JAN80 FIN DATE 19OCT07

SBS Report (w/o PM Distribution)

TOTAL USAGE FOR YEAR

DATA DATE 19DEC03 PAGE NO. 1

ACT ID	DESC	TOTAL	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008
Construction								
XT270.	PERF CONSTR ENGRG &	40					37	3
XT285.	PREP & ADMINISTER CO	100					70	30
XT290.	RESOLVE CONTRACT CLA	130					92	39
XT295.	ACPT CONTRACT/PREP F							
TOTAL	CO	270					198	72
Project Initiation Document								
XT150.	DEV PROJ INITIATION							
TOTAL	PD							
Permits & Environmental Studies								
XT160.	PERF PRELIM ENGRG ST							
XT165.	PERF ENVIRO STUDIES							
XT165.10	PERF GENERAL ENVIRO	140		140				
XT205.	OBT PERMITS/AGREMENTS							
TOTAL	PE	140		140				
Project Management								
XT100.	PERF PROJ MGMT	1100		171	321	321	286	
XT100.05	PROJ MGMT - PID COMP							
XT100.10	PROJ MGMT - PA&ED CO							
XT100.15	PROJ MGMT - PS&E COM							
XT100.20	PROJ MGMT - CONSTR C							
TOTAL	PM	1100		171	321	321	286	
Plans, Specifications & Estimates								
XT185.	PREP BASE MAPS & PLA							
XT185.05	REV & UPDATE PROJ IN							
XT185.15	PERF PRELIM DSGN							
XT185.20	PREP ENGRG RPTS							
XT190.	PREP STRUC SITE PLAN							
XT210.	PREP PRELIM STRUC DS							
XT215.	PREP STRUC GENERAL P							
XT230.	PREP DRAFT PS&E	1810			989	821		
XT235.	MITIGATE ENVIRO IMPA	60			60			
XT240.	PREP DRAFT STRUC PS&							
XT250.	PREP FNL STRUC PS&E							
XT255.	CIRCULATE/REV & PREP	818		771	47			
XT260.	PREP CONTRACT DOCS							
XT265.	0ADVERTISE/OPEN BIDS							
TOTAL	PS	2688		771	1096	821		
Right of Way								
XT200.	COORDINATE UTIL							
XT225.	OBT R/W INTERESTS FO							
XT300.	PERF FNL R/W ENGRG A							
TOTAL	RW							
REPORT TOTAL		4198		1082	1418	1142	485	72

PSR Performance Measures

For EA: 24340K

SCOPE

Yes No

- ☒ ☐ • Is the "Need and Purpose" clearly defined and written in accordance with applicable permitting agency requirements?
- ☒ ☐ • Do the alternatives stay within scope or solve problem identified in "Need and Purpose"?
- ☒ ☐ • Does the scope incorporate required allied projects such as Traffic Management System (TMS) elements, replacement planting, environmental mitigation, maintenance needs, and relinquishment requirements.
- ☒ ☐ • Have non-standard features, if any, been approved using established guidelines?
- ☒ ☐ • Is scope consistent and coordinated with local, regional and state system plans?

Scope Confidence Rating: 5
1 low to 5 high

COST

Yes No

- ☒ ☐ • Is the estimate realistic and in accordance with established guidelines? Does it include a sum for contingencies consistent with risk?
- ☒ ☐ • Does the cost incorporate required allied projects such as TMS elements, replacement planting, environmental mitigation, relinquishment requirements.
- ☒ ☐ • Is the right of way cost developed in accordance with established guidelines and consistent with anticipated needs?
- ☐ ☒ • Were benefit/cost ratios and/or the data to calculate them provided?
- ☒ ☐ • Were funding sources and commitments identified? Is proposed funding program consistent with project type?
- ☒ ☐ • Were support costs identified in a manner consistent with SB 45 and CTC Guidelines and supported by a complete project work plan?

Cost Confidence Rating: 4
1 low to 5 high

SCHEDULE

Yes No

- ☒ ☐ • Is time allowed for environmental evaluation and construction commensurate with anticipated studies and work windows (e.g., hazardous waste, endangered or season-specific species)?
- ☒ ☐ • Does the schedule incorporate required allied projects such as TMS elements, replacement planting, environmental mitigation, relinquishment requirements.
- ☒ ☐ • Is Right of Way time provided consistent with anticipated needs, including railroad and utilities?

Schedule Continued:

- ☒ ☐ • Is the schedule consistent with district resource capacity and based on an approved project work plan?
- ☒ ☐ • Do local stakeholders agree with the schedule?
- ☒ ☐ • Is schedule consistent and coordinated with local, regional and state plans?

Schedule Confidence Rating: 4
1 low to 5 high

QUALITY

Yes No

- ☒ ☐ • Was the range of alternatives identified and evaluated consistent with the need and purpose of the project?
- ☒ ☐ • Was the preliminary design, right-of-way, traffic and environmental effort adequate to confidently establish scope, schedule and estimate?
- ☒ ☐ • Were the studies adequate to identify all project stakeholders such as permitting agencies and community groups, and their anticipated levels of involvement?
- ☒ ☐ • Were there adequate peer reviews such as district functional units, safety, maintenance and constructability reviews, value analysis, and OPPD so to alleviate any undue risk?

Quality Confidence Rating: 5
1 low to 5 high

Overall PSR Confidence Score

Total: $18 \times 5 =$ 90

Note: Add above individual section confidence ratings and multiply by 5 to obtain overall confidence score. A score of less than 70 indicates "High Risk".

OTHER:


Explain any "No" responses as appropriate: *No benefit/cost ratio performed.*

Note: Any "No" boxes checked indicate a high risk and potential future problems

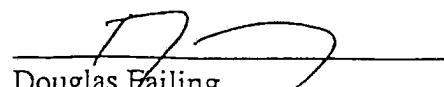
PSR development support costs: \$50,000

Prepared By:

I have read and approve this evaluation:


John K. Lee
Project Manager

12/23/03
Date


Douglas Failing
District Director

1/8/04
Date